

Listing of Claims:

1. (Currently Amended) A method for processing image signals, comprising ~~the steps of:~~

reading an image recorded on a recording medium so as to generate image signals representing said image;

5 applying, to said image signals, a multi-resolution conversion processing of at least level 1, which is capable of reducing an image size of said image signals, ~~to said image signals read in said reading step~~, so as to generate first-converted image signals from said image signals; and

10 applying a Dyadic Wavelet transform of at least level 1 to low frequency band component signals included in said first-converted image signals ~~generated in said applying step of said multi-resolution conversion processing~~, so as to generate second-converted image signals from said first-converted image
15 signals;

wherein an image size of said first-converted image signals is smaller than ~~that~~ the image size of said image signals.

2. (Currently Amended) The method of claim 1, further comprising ~~the step of:~~

applying a first image processing to said second-converted
image signals generated ~~in said~~ by applying ~~step of~~ said Dyadic
5 Wavelet transform.

3. (Currently Amended) The method of claim 1, further
comprising ~~the step of~~:

applying a first image processing to high frequency band
component signals included in said second-converted image signals
5 generated ~~in said~~ by applying ~~step of~~ said Dyadic Wavelet
transform.

4. (Currently Amended) The method of claim 3, wherein said
first image processing ~~includes such a processing that~~ comprises
suppressing a signal intensity of a specific pixel, which fulfils
a predetermined condition established in advance among pixels
5 represented by said high frequency band component signals ~~, is~~
~~suppressed in said applying step of said first image processing.~~

5. (Currently Amended) The method of claim 2, further
comprising ~~the step of~~:

applying a second image processing to said first-converted
image signals generated ~~in said~~ by applying ~~step of~~ said
multi-resolution conversion processing.

6. (Currently Amended) The method of claim 2, further comprising ~~the step of:~~

applying a second image processing to high frequency band component signals included in said first-converted image signals generated ~~in said~~ by applying ~~step of~~ said multi-resolution conversion processing.

7. (Currently Amended) The method of claim 6, wherein said second image processing ~~includes such a processing that~~ comprises suppressing a signal intensity of a specific pixel, which fulfils a predetermined condition established in advance among pixels represented by said high frequency band component signals ~~, is suppressed in said applying step of said second image processing.~~

8. (Original) The method of claim 1, wherein said multi-resolution conversion is an orthogonal wavelet conversion or a bi-orthogonal wavelet conversion.

9. (Currently Amended) The method of claim 1, further comprising ~~the steps of:~~

determining a changeover level from said multi-resolution conversion processing to said Dyadic Wavelet transform, based on a resolution of said read image signals ~~read in said reading step;~~

wherein said multi-resolution conversion processing is applied to said image signals according to said determined changeover level ~~determined in said determining step~~, and said Dyadic Wavelet transform is applied to said low frequency band component signals according to said determined changeover level ~~determined in said determining step~~.

10. (Currently Amended) An apparatus for processing image signals, comprising:

a reading section to read an image recorded on a recording medium so as to generate image signals representing said image;

a first converting section to apply a multi-resolution conversion processing of at least level 1, which is capable of reducing an image size of said image signals, to said image signals read by said reading section, so as to generate first-converted image signals from said image signals; and

a second converting section to apply a Dyadic Wavelet transform of at least level 1 to low frequency band component signals included in said first-converted image signals generated by said first converting section, so as to generate second-converted image signals from said first-converted image signals;

wherein an image size of said first-converted image signals is smaller than ~~that~~ the image size of said image signals.

11. (Original) The apparatus of claim 10, further comprising:

a first image-processing section to apply a first image processing to said second-converted image signals generated by said second converting section.

12. (Original) The apparatus of claim 10, further comprising:

a first image-processing section to apply a first image processing to high frequency band component signals included in said second-converted image signals generated by said second converting section.

13. (Currently Amended) The apparatus of claim 12, wherein said first image processing ~~includes such a processing that~~ comprises suppressing a signal intensity of a specific pixel, which fulfils a predetermined condition established in advance among pixels represented by said high frequency band component signals ~~, is suppressed.~~

14. (Original) The apparatus of claim 11, further comprising:

a second image-processing section to apply a second image processing to said first-converted image signals generated by said first converting section.

15. (Original) The apparatus of claim 11, further comprising:

a second image-processing section to apply a second image processing to high frequency band component signals included in said first-converted image signals generated by said first converting section.

16. (Currently Amended) The apparatus of claim 15, wherein said second image processing ~~includes such a processing that~~ comprises suppressing a signal intensity of a specific pixel, which fulfils a predetermined condition established in advance among pixels represented by said high frequency band component signals ~~, is suppressed.~~

17. (Original) The apparatus of claim 10, wherein said multi-resolution conversion is an orthogonal wavelet conversion or a bi-orthogonal wavelet conversion.

18. (Original) The apparatus of claim 10, further comprising:

a determining section to determine a changeover level from
said multi-resolution conversion processing to said Dyadic
Wavelet transform, based on a resolution of said image signals
read by said reading section;

wherein said first converting section applies said
multi-resolution conversion processing to said image signals
according to said changeover level determined by said determining
section, and said second converting section applies said Dyadic
Wavelet transform to said low frequency band component signals
according to said changeover level determined by said determining
section.

19. (Currently Amended) A computer readable storage medium
storing a computer program for executing that is executable by a
computer to cause the computer to conduct operations for
processing image signals, the program being executable by a
computer to cause the computer to perform a process comprising
~~the functional steps of:~~

reading an image recorded on a recording medium so as to
generate image signals representing said image;

applying, to said read image signals, a multi-resolution
conversion processing of at least level 1, which is capable of
reducing an image size of said image signals, ~~to said image~~

~~signals read in said reading step,~~ so as to generate
first-converted image signals from said image signals; and

15 applying a Dyadic Wavelet transform of at least level 1 to
low frequency band component signals included in said
first-converted image signals ~~generated in said applying step of~~
~~said multi-resolution conversion processing,~~ so as to generate
second-converted image signals from said first-converted image
signals;

20 wherein an image size of said first-converted image signals
is smaller than ~~that~~ the image size of said image signals.

20. (Currently Amended) The computer program readable
storage medium of claim 19, wherein the process further
~~comprising the functional step of~~ comprises:

5 applying a first image processing to said second-converted
image signals generated ~~in said~~ by applying ~~step of~~ said Dyadic
Wavelet transform.

21. (Currently Amended) The computer program readable
storage medium of claim 19, wherein the process further
~~comprising the functional step of~~ comprises:

5 applying a first image processing to high frequency band
component signals included in said second-converted image signals

generated ~~in said~~ by applying ~~step of~~ said Dyadic Wavelet transform.

22. (Currently Amended) The computer program readable storage medium of claim 21, wherein said first image processing ~~includes such a processing that comprises suppressing~~ a signal intensity of a specific pixel, which fulfils a predetermined condition established in advance among pixels represented by said high frequency band component signals ~~, is suppressed in said applying step of said first image processing.~~

23. (Currently Amended) The computer program readable storage medium of claim 20, ~~wherein the process~~ further ~~comprising the functional step of~~ comprises:

applying a second image processing to said first-converted image signals generated ~~in said~~ by applying ~~step of~~ said multi-resolution conversion processing.

24. (Currently Amended) The computer program readable storage medium of claim 20, ~~wherein the process~~ further ~~comprising the functional step of~~ comprises:

applying a second image processing to high frequency band component signals included in said first-converted image signals

generated ~~in said by~~ applying ~~step of~~ said multi-resolution conversion processing.

25. (Currently Amended) The computer ~~program~~ readable storage medium of claim 24, wherein said second image processing ~~includes such a processing that comprises suppressing~~ a signal intensity of a specific pixel, which fulfils a predetermined condition established in advance among pixels represented by said high frequency band component signals ~~, is suppressed in said applying step of said second image processing.~~

26. (Currently Amended) The computer ~~program~~ readable storage medium of claim 19, wherein said multi-resolution conversion is an orthogonal wavelet conversion or a bi-orthogonal wavelet conversion.

27. (Currently Amended) The computer ~~program~~ readable storage medium of claim 19, wherein the process further ~~comprising the functional steps of~~ comprises:

determining a changeover level from said multi-resolution conversion processing to said Dyadic Wavelet transform, based on a resolution of said read image signals ~~read in said reading step;~~

wherein said multi-resolution conversion processing is applied to said image signals according to said determined changeover level ~~determined in said determining step~~, and said Dyadic Wavelet transform is applied to said low frequency band component signals according to said determined changeover level ~~determined in said determining step~~.

28. (Currently Amended) An apparatus for recording an output image onto an outputting medium, comprising:

a reading section to read an image formed on a recording medium so as to generate image signals representing said image;

a processing section to process said image signals so as to generate ~~an~~ output image signals representing said output image; and

a recording section to record said output image onto said outputting medium, based on said output image signals generated by said processing section;

wherein said processing section ~~includes~~ comprises:

a first converting section to apply a multi-resolution conversion processing of at least level 1, which is capable of reducing an image size of said image signals, to said image signals read by said reading section, so as to generate first-converted image signals from said image signals; and

20 a second converting section to apply a Dyadic Wavelet
transform of at least level 1 to low frequency band component
signals included in said first-converted image signals generated
by said first converting section, so as to generate
second-converted image signals from said first-converted image
signals;

25 wherein an image size of said first-converted image
signals is smaller than ~~that~~ the image size of said image
signals.

29. (Currently Amended) The apparatus of claim 28, wherein
said processing section further ~~includes~~ comprises:

5 a first image-processing section to apply a first image
processing to said second-converted image signals generated by
said second converting section.

30. (Currently Amended) The apparatus of claim 28, wherein
said processing section further ~~includes~~ comprises:

5 a first image-processing section to apply a first image
processing to high frequency band component signals included in
said second-converted image signals generated by said second
converting section.

31. (Currently Amended) The apparatus of claim 30, wherein said first image processing ~~includes such a processing that~~ comprises suppressing a signal intensity of a specific pixel, which fulfils a predetermined condition established in advance among pixels represented by said high frequency band component signals ~~, is suppressed.~~

32. (Currently Amended) The apparatus of claim 29, wherein said processing section further ~~includes~~ comprises:

a second image-processing section to apply a second image processing to said first-converted image signals generated by said first converting section.

33. (Currently Amended) The apparatus of claim 29, wherein said processing section further ~~includes~~ comprises:

a second image-processing section to apply a second image processing to high frequency band component signals included in said first-converted image signals generated by said first converting section.

34. (Currently Amended) The apparatus of claim 33, wherein said second image processing ~~includes such a processing that~~ comprises suppressing a signal intensity of a specific pixel, which fulfils a predetermined condition established in advance

5 among pixels represented by said high frequency band component signals ~~, is suppressed.~~

35. (Original) The apparatus of claim 28, wherein said multi-resolution conversion is an orthogonal wavelet conversion or a bi-orthogonal wavelet conversion.

36. (Currently Amended) The apparatus of claim 28, wherein said processing section further ~~includes~~ comprises:

a determining section to determine a changeover level from said multi-resolution conversion processing to said Dyadic
5 Wavelet transform, based on a resolution of said image signals read by said reading section;

wherein said first converting section applies said multi-resolution conversion processing to said image signals according to said changeover level determined by said determining
10 section, and said second converting section applies said Dyadic Wavelet transform to said low frequency band component signals according to said changeover level determined by said determining section.